

With respect to the rejection under 35 U.S.C. §102(b) as being anticipated by Sarraf, Applicants respectfully submit that there is no teaching, suggestion or motivation within the prior art as the combination of features recited in Applicant's claims. Claim 1 cites:

1. A wick structure to be attached to an internal wall of a tubular member, comprising:  
a mesh in the form of an elongate circular ring and a plurality of particulates embedded in interstices of the mesh, wherein the mesh and the particulates embedded therein are attached to the internal wall of the tubular member by a sintering process.

(Emphasis added)

Focusing on "a plurality of particulates embedded in interstices of the mesh, wherein the mesh and the particulates embedded therein are attached to the internal wall" as asserted in independent claim 1. Sarraf discloses a heat pipe having a mounting surface made from material whose coefficient of thermal expansion (CTE) matches, or nearly matches that of silicon surface of the heat generating source. Sarraf tries to resolve the heat pipe broken-down problem due to build-up of stress, as well as subsequent damage due to the interface between a heat pipe and the relatively brittle silicon component. (Sarraf column 1, lines 27-30). Sarraf uses CTE-matched materials for the base of the heat pipe where is in contact with the heat-generating silicon surface. These CTE-matched base is made from an OFE copper foil layer and an aluminum nitride layer, it will prevent the damage of the heat pipe caused by build-up stress. Although Sarraf's pipe includes a tubular body, a central passageway, a wick disposed on at least an evaporator portion of said central passageway, a working fluid and the base made of CTE-matched materials. Nowhere in Sarraf discloses "a plurality of particulates embedded in interstices of the mesh, wherein the mesh and the particulates embedded therein are attached to the internal wall." (Independent claim 1 and page 4, lines 4 – 14 of the present application.) Therefore, Applicant respectfully traverses the Examiner's rejection. As stated in MPEP §2131:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 2 USPQ2d 1051, 1053 (Fed. Cir.

1987). The identical invention must be shown in as complete detail as is contained in the...claim. Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

(Emphases added).

With respect to the rejection of claims 11-13, and 15-16 under 35 U.S.C. §103(a) as being unpatentable over Sarraf in view of Kosson et al., and the rejection of claims 14 under 35 U.S.C. §103(a) as being unpatentable over Sarraf in view of Kosson et al. and Han et al. Based on the differences between Sarraf and the present application discussed above, Applicant respectfully submits that not all elements cited in Applicant's claims are taught or suggested within the prior art individually or their combination. Focusing on "a plurality of particulates embedded in interstices of the mesh, wherein the mesh and the particulates embedded therein are attached to the internal wall" (element of the independent claim 1.) Kosson discloses a heat pipe having a porous artery disposed around a hollow core. (Kosson column 1, lines 25-26). And "the artery of said heat pipe may be formed by winding a screen in the spiral around a hollow perforated mandrel to build up a multi-layered structure." (Kosson column 2, lines 25-27 and Figs 1-5.) Kosson places an artery in the middle of the pipe where the artery can be made from screen, open foam, sintered metal. While Han Nosson doesn't teach or disclose the element of the present invention.


Meantime, Han discloses "a heat pipe having a pipe body and a wick having a larger diameter than that of the pipe body before being inserted into the pipe body... wherein the wick includes a plurality of groups of wires which are spirally woven to form a cylindrical wick." (Han column 1, lines 63-67 and column 2, lines 1-2). The combination of the three cited prior art or each individual prior art cited doesn't teach or disclose the element of "a plurality of particulates embedded in interstices of the mesh, wherein the mesh and the particulates embedded therein are attached to the internal wall" of all claims of the present invention. Therefore, Applicant

respectfully disagrees with the Examiner's rejections.

If the Examiner believes that a further telephonic interview will facilitate allowance of the claims, he is respectfully requested to contact the undersigned at (610) 446-5886. For the reasons stated above, Applicants respectfully assert that the pending claims are in condition for allowance. Reconsideration and allowance of the pending claims are respectfully requested.

Respectfully submitted,

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